

## CLAIMS

1. A multicast source control method, comprising the steps of:
  - a. creating multicast source authentication information;
  - 5        b. a management platform of the multicast source authentication information dynamically updating said multicast source authentication information in accordance with restriction on multicast source;
  - c. controlling multicast message sent from the multicast source in accordance with said multicast source authentication information.
- 10        2. The multicast source control method according to claim 1, wherein said step a comprises:
  - creating multicast source authentication information in master multicast source authentication server and slave multicast source authentication server, respectively;
  - wherein the management platform of the multicast source authentication information in
  - 15        said step b comprises a master multicast source authentication server.
3. The multicast source control method according to claim 1 or 2, wherein said multicast source authentication information is recorded in a tabular form;
  - said multicast source authentication information table contains a corresponding
  - relationship between multicast source address and multicast address;
  - 20        said multicast address is a result of AND operation on multicast address and address mask.
4. The multicast source control method according to claim 3, wherein said step b comprises:
  - said slave multicast source authentication server, in accordance with the multicast
  - 25        source authentication information in the master multicast source authentication server, updating the multicast source authentication information stored therein at a predefined period;

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when the multicast source authentication information in said master multicast source authentication server is changed, notifying said slave multicast source authentication server to update the multicast source authentication information stored therein.

5           5. The multicast source control method according to claim 4, wherein said step c comprises:

          c1. after receiving a multicast message sent from the multicast source, a predefined node initiating an authentication request to the preconfigured multicast source authentication server thereof;

10           c2.said multicast source authentication server performing a longest prefix matching with the multicast address contained in the authentication request based on the multicast address in the multicast source authentication information table stored therein, and sending a response indicating whether the authentication request is successful to said predefined node according to the matching result;

15           c21.if the multicast source address corresponding to the matched multicast address is identical to the multicast source address in said authentication request, sending a response indicating that the authentication request is successful to said predefined node ; after receiving the response indicating that the authentication request is successful, said predefined node permitting said multicast message to enter  
20 into the multicast network;

          c22.if the multicast source address corresponding to the matched multicast address is different from the multicast source address in said authentication request, sending a response indicating that the authentication request has failed, to said predefined node; after receiving the response indicating that the authentication request  
25 has failed, said predefined node forbidding said multicast message to enter into the multicast network.

          6. The multicast source control method according to claim 5, wherein said multicast

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source authentication information table further contains records indicating that it is needed for authentication requests to continue to be initiated to other multicast source authentication servers, the records corresponding to addresses of said other multicast source authentication servers.

5           7. The multicast source control method according to claim 6, wherein said step c2 further comprises:

          c23. if the matched multicast address corresponds to an address of other multicast source authentication server, sending said predefined node information indicating that said predefined node information is needed to continue to request for authentication from  
10 other multicast source authentication servers, and information of the address of said other multicast source authentication servers; said predefined node reinitiating an authentication request for the multicast source of said multicast message according to the received information.

          8. The multicast source control method according to claim 7, wherein the method  
15 also comprises:

          if the number of authentication request sent from said predefined node for the multicast source of said multicast message exceeds a predefined number, the authentication request for the multicast source being deemed as failed.

          9. The multicast source control method according to claim 1, 5 or 8, wherein the  
20 method also comprises: if said predefined node does not receive a response in predefined time after initiating the authentication request for the multicast source of said multicast message, the authentication request for said multicast source being deemed as failed.

          10. A multicast source control system, comprising:  
25           a master multicast source authentication server: when multicast source authentication information stored therein is changed, the master multicast source authentication server notifies slave multicast source authentication servers; when the

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master multicast source authentication server receives an authentication request transmitted from a predefined node, it transmits a corresponding authentication response to said predefined node in accordance with the authentication information stored therein;

- 5           a group of slave multicast source authentication servers: the slave multicast source authentication servers update multicast source authentication information stored therein at a predefined period in accordance with the multicast source authentication information in the master multicast source authentication server; when the slave multicast source authentication servers receive an authentication message transmitted from a predefined  
10 node, they transmit a corresponding authentication response to said predefined node in accordance with the authentication information stored therein;

- a predefined node: when the predefined node receives a multicast message sent from the multicast source, it initiates an authentication request to the preconfigured multicast source authentication server thereof, and controls the multicast message sent  
15 from the multicast source in accordance with the response from the multicast source authentication server.

11. The multicast source control system according to claim 10, wherein said predefined node is a router or a switch.